

SER. NO. 10/045,272
EXAM. SERGENT
FILING DATE: 10/25/2001

REMARKS/ARGUMENTS

The Examiner's 35 USC Section 112 Objections

Applicants have reviewed the Office Action of August 26, 2003 wherein the Examiner rejects pending claims 1-16 under 35 USC section 112 and as allegedly obvious over EP 424,705 further in view of Brandoepke et al. ('613) and CA 2,269,412. Applicants respectfully traverse these rejections for the reasons presented below.

With regard to the section 112 objections, although the Applicants have amended claim 1 to remove a grammatical syntax error, the Examiner's comments in item 3 of the Office Action indicate that the scope of claim 1 as filed is understood.

With respect to claims 13 and 14, the amendments more clearly point out that the weight percent is calculated on the polyurethane, and not on the dispersion as set forth in the specification at page 3, ll. 11 – 12 of the application (for claim 13) and on page 2, ll. 17 – 22 (for claim 14).

As to the Examiner's rejection of the expression "on solid" in claim 5 as unclear, the Applicants respectfully disagree. "On solid" is a common term in the technical field of coatings. One skilled in the art would know that this expression is commonly used to indicate that a parameter is to be calculated on the non-volatile content of a composition or component, i.e. the composition or component without any volatile solvents or diluting agents.

In claim 6, the expression "obtainable by" has been grammatically amended to "obtained by". Since claim 6 relates to a waterborne coating composition comprising a polyurethane dispersion, Applicants maintain that it is clear that water is the medium in which the dispersing is to occur. Therefore, the language "dispersing groups" does not render the claim indefinite.

Since the hydroxyl groups in claims 7 are illustrative and not limiting, they have been removed from claim 7 and placed in new claim 17.

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Within claims 7 and 8, the recited components are present in addition to the (meth)acryloyl-functional polyurethane of claim 1 and claim 7 has been grammatically amended to reflect that the components are additional. Support is found in the specification, in particular p. 16, ll. 6 – 12.

A skilled person knows which groups are suitable as the isocyanate-reactive groups recited in claim 8. Further, when reading claim 8 in the light of the description of the application, in particular p. 16, ll. 6 - 12, the scope of this claim is clear.

Claim 9 has been amended to clean up clerical errors in the typing of the claim.

With respect to claims 11 and 12, Applicants traverse the Examiner's statement that these claims are unclear. A skilled person knows how to remove the aqueous carrier of a water borne coating composition after application. For example, it is clear that the aqueous carrier can either be allowed, i.e. without further intervention, to be removed, e.g. by evaporation. Alternatively, the aqueous carrier may be caused to be removed, i.e. with intervention, for example by additional process steps to accelerate the evaporation of water, such as heating or forced ventilation. A skilled person is aware of these possibilities to remove the aqueous carrier of an applied coating.

The Examiner's 35 USC Section 103 Objections

The Examiner also alleges that pending claims 1-16 are obvious over EP 424,705 further in view of Brindoepke et al, ('613) and CA 2,269,412. Applicants respectfully traverse these rejections. The Examiner erroneously finds that EP 424 705-A discloses aqueous coating compositions comprising (meth)acryloyl-functional polyurethanes. Contrary to the Examiners statements, EP 0 424 705-A discloses water dispersible polyurethane/acrylic graft copolymers (abstract). The alkylene oxide content of the final graft copolymers is between 5 and 25 weight-% (p. 5, ll. 14 – 17). However, the (meth)acryloyl functionality originally present in the polyurethane is depleted in the grafting and radical polymerization reaction

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(p. 6, ll. 13 – 18). Consequently, the polyurethane/acrylic graft polymers obtained do not comprise any (meth)acryloyl functionality. The reference only discloses coating compositions comprising these polyurethane/acrylic graft polymers. Therefore, in contrast to what the Examiner has alleged, this reference does not disclose or suggest aqueous coating compositions comprising (meth)acryloyl-functional polyurethanes.

In the absence of curable (meth)acryloyl-functional groups, EP 0 424 705-A provides no suggestion or motivation to include photoinitiators in the coating compositions described therein. Even if, for the sake of argument, one were to contemplate adding a photoinitiator such as known from US 5,391,613 or CA 2,269,412, to the coating compositions of EP 0 424 705-A, still one would not arrive at the subject-matter of current claim 1. The coating compositions thus obtained would not comprise (meth)acryloyl-functional groups and therefore they would not be photoactivatable.

Therefore, claim 1 as well as dependent claims 2 – 10 and the method claims 11 – 16 relating to methods of coating a substrate with the compositions of claims 1 to 10 are not obvious over EP 0 424 705-A in view of US 5,391,613 or CA 2,269,412.

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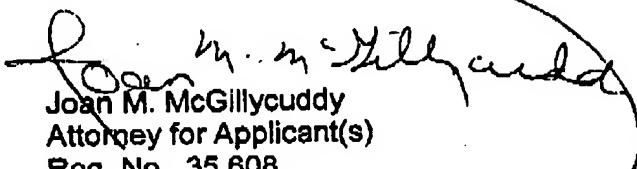
CONCLUSION

As set forth above, the Applicants have addressed the Examiner's 112 objections. The Applicants have also demonstrated that the combination of EP 0 424 705-A in view of US 5,391,613 or CA 2,269,412 neither discloses nor suggests the present invention, nor is there a motivation to combine these references with respect to the present invention.

Based on at least the application, and the amendments and remarks herein, Applicants maintain it is not obvious in view of the cited prior art documents, either alone or in combination, to come up with the coating composition according to the present invention.

Applicants request withdrawal of the objections and believe the present application to be in condition for allowance, which action is respectfully requested.

Respectfully submitted,


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